

Engineering Economy

	<i>Find</i>	<i>From</i>	<i>Equation</i>	<i>No.</i>
Single Payment	F	P	$F = P(1+i)^n$	2.2
	P	F	$P = F/(1+i)^n$	2.3
Equal-Payment Series	P	A	$P = A \left[\frac{(1+i)^n - 1}{i(1+i)^n} \right]$	2.6
	A	P	$A = P \left[\frac{i(1+i)^n}{(1+i)^n - 1} \right]$	2.7
	F	A	$F = A \left[\frac{(1+i)^n - 1}{i} \right]$	2.8
	A	F	$A = F \left[\frac{i}{(1+i)^n - 1} \right]$	2.9
Gradient Series (arithmetic)	P	G	$\frac{G}{i} \left[\frac{(1+i)^n - 1}{i(1+i)^n} - \frac{n}{(1+i)^n} \right]$	2.15
	A	G	$G \left[\frac{1}{i} - \frac{n}{(1+i)^n - 1} \right]$	2.17
	F	G	$G \left[\left(\frac{1}{i} \right) \left(\frac{(1+i)^n - 1}{i} - n \right) \right]$	
Gradient Series (geometric)	P	A_I	$A_I \left[\frac{1 - \left(\frac{1+g}{1+i} \right)^n}{i - g} \right]$	2.23 $i \neq g$
	P	A_I	$A_I \left[\frac{n}{1+i} \right]$	2.24 $i = g$
Breakeven	$\text{Profit} = R - (FC + VC)$ $= (r - v)Q - FC$			